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The possibility of using space correlation with microspheres petroleum deposits

Sungatullin R., Sungatullina G., Gluchov M., Osin Y., Vorobiyev V.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

The article presents data on the microspheres in Phanerozoic sediments of the Caspian Basin. It found almost perfect spherical formations diameter 170-950 microns. Studies were performed using microspheres of scanning electron microscopy with a microprobe analysis by X-ray. In mineralogical respect to the scope composed mainly of magnetite. Trace elements (Si, Al, Mn) in the microspheres increased from Paleozoic to Cenozoic deposits that can be used in the future as a geochemical criterion for stratigraphic correlation sections. In Cenozoic microspheres missing potassium and chromium, as noted in Paleozoic microspheres high chlorine content, which may be due to the presence of hibbingita. Textured surface of the microspheres (takyrs, plates, ribs, triangular depression, etc.), the presence of nickel and titanium impurities absence indicate their cosmic origin. Microspheres can be used as benchmarks in the search mikrostratigraficheskih hydrocarbons in sediments of different facies.

Keywords

Correlation, Cosmic dust, Magnetite, Microsphere, Petroleum deposits, Stratigraphy